

AMENDMENTS TO THE SPECIFICATION:

Please replace page 1 of the description as published with the following:

ELECTRICAL CONNECTOR WITH GROUNDED SHUTTER MEMBER

Field of the Invention:

This invention generally relates to the art of electrical connectors and, particularly, to an electrical connector which includes a grounded shutter member for closing a mating receptacle of the connector.

Background of the Invention:

Many electrical connectors include a dielectric housing having an opening or receptacle for receiving a complementary mating connector. A plurality of conductive terminals have contact portions exposed at or in the receptacle for engaging appropriate contacts of the mating connector. An example of such a connector is used in a portable information terminal which facilitates connection to a parent device such as a computer.

One of the problems with electrical connectors having receptacles that expose terminals is that the contact portions of the terminals may be engaged by an operator's fingers or other foreign objects which may cause damage to or deformation of the terminals. In order to alleviate this problem, some such electrical connectors are provided with protective covers or shutters which close the mating receptacle and are movable to open positions during mating. For instance, the covers or shutters may be pivotally mounted on the housing.

Examples of such connectors are shown in Japan Patent Laid-Open No. 8-203594 and Utility Model Laid-Open No. 5-1175. Another connector has a spring biased moveable cover as shown in U.S. patent 5,167,515.

Another problem with such connectors is the damage that can be caused to interior components by static electricity. For instance, a portable information terminal has integrated circuits and electronic parts installed therein. When the terminal is connected to the parent device, such as the computer, static electricity during mating can cause problems to the interior components. The present invention is directed to solving these various problems by providing an electrical connector with at least one movable shutter member for closing the receptacle of the connector as well as dissipating static electricity during mating.

Summary of the Invention:

An object, therefore, of the invention is to provide a new and improved electrical connector having a shutter member and which, additionally, is designed for dissipating static electricity.

In the exemplary embodiment of the invention, the connector includes a dielectric housing having a receptacle for receiving a complementary mating connector. A plurality of conductive terminals are mounted on the housing and have contact portions exposed in the